Implementing an Incident Review Analysis and Accountability System for ABC Construction

by

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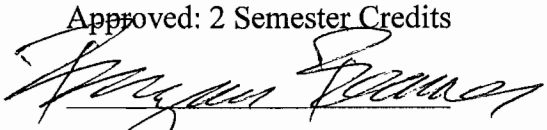

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ABSTRACT

The intention of this study is to develop a post-incident analysis procedure that will assist in the systematic management of exposure at the ABC Construction organization that encompasses accidents/near misses for all employees of the organization. The research performed will determine guidelines and procedures necessary to maximize the potential for preventing a reoccurrence of loss.

To achieve the objectives of the study, three activities were performed 1) a literature review was executed to provide insight on the best guidelines and procedures to follow when performing a post-incident analysis, 2) a post-incident analysis procedure following these best practices was developed and implemented into the safety management system procedures at ABC Construction, and 3) an evaluation of the procedure through sample forms was performed to gain knowledge of its effectiveness.

Main problems were identified from the results of the study including the following:

- Inadequate information was provided on the forms about multiple aspects of the incident,
- An inadequacy of corrective actions was identified to prevent the recurrence of an incident; which is one main purpose of a post-incident analysis,
- No training was provided to those conducting the post-incident analysis process.

Multiple recommendations were determined to address the above problems. These recommendations include:

- All sections of the form must be filled in with elaborate answers provided.
- Corrective actions must be identified and followed through on by the indicated employee.
- Training must be provided to all safety managers on the use of the post-incident analysis form and on the process of adequately completing the form.
- The entire post-incident analysis process must be integrated into ABC Construction's safety management system. Motivation for adequately completing the form and using it correctly must be built into the management structure.

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Chapter I: Introduction

It is a main focus for any organization to use all information available for the purpose of decreasing exposure to a loss. A post-incident analysis is a tool used to determine the root causes of an incident which has occurred to an employee. It is a process performed by a team made up of the involved employee(s), management overseeing the involved employee(s), and one or more risk control professionals in the organization (Cantarella, 1997). Through this process insight is gained on what exactly happened before, during, and after the incident from a detailed description given by the involved employee(s). As a result of these activities, determining factors, causes, and accountability of the incident are found. Upon completion of these findings, corrective action is taken and constructive reprimand is given to those responsible when necessary; this may involve disciplinary action as well.

ABC Construction does not have a post-incident analysis procedure in place. Recently they have begun using a process which models one clients' current procedure. However, the Risk Management team at ABC Construction does not believe it is an effective procedure and wants to develop a specific post-incident procedure that compliments their standards and policies. Currently a process is in the development stage for a systematic approach to post-incident analysis called Incident Review, Analysis and Accountability System (IRAAS). Initially, it will be used as a reactive approach to gain insight on the causes of the incident and will provide accountability with who was involved. After the analysis is completed results can then be used proactively to minimize pure loss exposures from ABC Construction. "Doing something to eliminate or reduce risk is essential if you are to move from reaction to action." (Grose, 1987, p. 14) From the findings of the incident, the Risk Management team is able to determine needed changes in policies, procedures, standards, and training techniques that are inadequate. All

changes are then communicated to all employees within the company; from top management to the newest employee.

Statement of the Problem

The lack of a formalized near-hit/accident analysis and follow-up accountability system for ABC Construction is placing the organization at risk of being unable to prevent the recurrence of people and property-oriented losses.

Purpose of the Study

It is the intention of this study to develop a post-incident analysis procedure that will assist in the systematic management of exposure at the ABC Construction organization that encompasses accidents/near misses for all employees of the organization. The research performed will determine guidelines and procedures necessary to maximize the potential for preventing a reoccurrence of loss.

Proposed Methodology

To establish pertinent information about the subject a literature review was executed to provide insight on the best guidelines and procedures to follow when performing a post-incident analysis. As well, a post-incident analysis procedure following these best practices was developed and implemented into the safety management system procedures at ABC Construction. An evaluation of the procedure was performed to gain knowledge of its effectiveness.

Assumptions of the Study

The main intention when performing this research is to form an IRAAS with adequate documentation to follow. This documentation will include a standardized form for all future incidents that may occur. Upon completion of the incident analysis and closure to all evaluation,

all documentation will be kept on file via paper copy or in an electronic database.

Every incident occurrence including each medical case, near miss, recordable, and loss time incident will be analyzed with the IRAAS. It is in the best interest of ABC Construction to determine what is causing losses within the organizations workforce. Therefore, only incidents resulting from ABC Construction employees will be analyzed with this system, and not others working in unison with ABC Construction. All subcontractors or other on-site organizations outside of ABC Construction will not be analyzed using this system in the event of an incident.

All individuals directly involved in an incident, as well as their full supervisory chain of command will be involved in the analysis process. The full supervisory chain of command includes: foreman, superintendent, general superintendent, project manager, project executive, risk control manager, and executive. If the incident involves an incident that occurred out of the yard or office, the same respective supervisory chain of command will be engaged. Witnesses and employees working in close proximity to incident location, or individuals who could have taken action to prevent the occurrence of the incident will also be involved in the analysis process.

It is the intent of this research to determine beneficial reasoning and non-beneficial reasoning for using a post-incident analysis. The use of this analysis is imperative for determining specific causes leading to an incident occurrence. Financial loss and incident accountability will be determined from the completed analysis as well.

Definition of Terms

DMV Moving Violation. Any act rendered illegal by the Department of Motor Vehicles, to include speeding more than ten miles per hour above the posted speed limit. (Miron Corporate Risk Control Policy, 2009)

Loss Time Incident. Any claim in which the doctor takes an employee off of work or ABC Construction does not accommodate an employee who has been given restrictions by the doctor for over one day. This is recordable. (Miron Corporate Risk Control Policy, 2009)

Medical. A claim that requires treatment such as stitches/glue, prescription strength drugs, and minor treatments such as physical therapy or chiropractic treatment. This is recordable. (Miron Corporate Risk Control Policy, 2009)

Pure Loss Exposure. Any loss an organization has an exposure to concerning property, personnel, and liability. (Miron Corporate Risk Control Policy, 2009)

OSHA Recordable: A work-related injury or illness resulting in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness. ("*General recording criteria,*" n.d.).

Restricted Activity. A claim that prohibits an employee from performing their normal job for any time period over one day. This is recordable. (Miron Corporate Risk Control Policy, 2009)

Limitations of the Study

In all aspects of the IRAAS, it is in the beginning stage of an ongoing analysis procedure. There are no previous post-incident analysis policies or procedures to benchmark the company status, compare to, or to comply with currently. With no previous information available it will take extensive time and research to determine the best guidelines and procedures to follow when performing an IRAAS at ABC Construction. Upon finding the best techniques, ABC Construction will be able to perform the procedure at the best effort possible and provide adequate accurate information for an evaluation process. ABC Construction has previously used other clients' post-incident analyses to determine causation of an incident. However, all analyses

previously performed will not be used for any research. Consistent records are pertinent for the change in a standard, policy, or procedure if any is found to be inadequate as the result of an IRAAS. To gain this consistency only ABC Construction employees will be involved in the analysis process.

Chapter II: Literature Review

It is the purpose of this literature review to interpret information from available resources which relate to performing and implementing a post-incident analysis procedure within an organization. An organization must use a post-incident analysis process to determine the causes of the outcome, in the event of an incident occurrence. This process should be in a standardized form to accommodate all incidents which could possibly happen within an organizations scope of work. By using such an analysis correctly, a multitude of information can be acquired to gain insight on both properly working in-place and faulty procedures which are aggravating safety procedures (Dennis, 1992). All findings must be managed correctly to gain the best results from the use of the analysis process. The findings must be as well communicated to the proper individuals within the organization whom will most benefit from the information (personal communication with K. Hildebrandt, July 6, 2009). It is vital to have participation by all involved in the goals of the company and especially those who are put at a higher risk throughout the organization.

Managing an Incident Analysis

Information gained from any analysis system is only useful if it is managed properly to better achieve an organizations goals; ultimately increasing production and profit. "The role of an accident investigation is to prevent similar incidents from occurring by identifying and correcting hazardous conditions, procedures, and practices, and by communicating the findings to others who are at risk." (Jacobs, 1989, pg. 14)

Investigating the incident. To fully understand why an incident occurred, it must be investigated. Performing thorough investigations will help to identify situations which could potentially lead to an incident, highlight areas needing to be changed in a safety management

system, and provide sufficient communication of lessons learned. These investigations are conducted to determine the underlying causes which contributed to the outcome of an incident. As stated by Boraidko (2008) every instance where an incident has occurred and those where a near miss occurred should be analyzed and investigated. Failure to act upon situations where a knowingly unsafe condition exists and hasn't been controlled or eliminated is only taking a chance that an incident will not occur (Sorrell, 1998). The underlying causes determined from the investigation must be accurate to drive the necessary corrective actions; these must be executed promptly to prevent the recurrence of the incident according to Boraidko (2008).

Throughout the investigation, the team involved must show a complete concern for the safety and health of all employees (Boraikdo, 2008). The goal of those performing the incident investigation is to be perceived as protecting the company's most valuable assets, the employees, and not perceived as a way to place blame on an individual. "At its best, an incident investigation seeks to prevent a recurrence. At its worst, it seeks to assign blame or justify disciplinary action." (Jacobs, 1989, pg. 14)

Managing and controlling loss after the analysis. Atkinson (1999) states there are four key strategies which can be utilized in a company to manage safety and control loss from a pure loss exposure standpoint. These strategies include: (I) Incident Management, (II) Physician Selection and Follow-up, (III) Case Management, and (IV) Return-To-Work Programs.

I) *Incident Management*: "The primary intent of an incident investigation is to identify effective solutions" (Hughes, 2009, p. 55). Two major steps are involved when managing an incident after it has occurred. The first step is to provide the injured employee medical attention as soon as possible to the degree needed (Atkinson, 1999). The second step is to determine the root causes of the incident by performing

an incident investigation. The employee and supervisor(s) must be involved to gain the best results from the investigation and all must agree on what happened. This information is then used to determine how to prevent the process from occurring in the future. "The purpose of the investigations is not to place blame on any one individual, but to identify causes, then find what system within the organization failed" (Atkinson, 1999, p. 74). Therefore, an incident is not the fault of only one individual, but has multiple causes (Geller, 2008). Do not place the blame of an incident on one person.

II) *Physician Selection and Follow-up*: Atkinson (1999) states that as a result of an incident needing medical attention, an individual has two options to seek for a physician. Ordinarily an employer will have an occupational physician or clinic nearby the jobsite where an injured employee can quickly seek medical services. It is also a possibility for an injured individual to seek medical attention from a family physician. However, the best type of service is through the occupational clinic as it is the most adequate for the injured individual and the company because of the location and fast treatment available. Also, these clinics are to the benefit of all since the physicians employed here understand workplace injuries and the need for returning to work as soon as possible (personal communication with K. Hildebrandt, July 6, 2009). No employee wants to be off of work or on restricted duty if the situation can be deterred.

III) *Case Management*: After an incident there must be continual communication involving the injured employee, physician, employer, and insurance carrier to sustain the best outcome of the incident. Most importantly, the employer must be in frequent

contact with the injured employee to gain trust and determine the quickest return-to-work possible. "Employees who fail to receive this communication often experience a range of negative emotion, confusion, and alienation that no one has bothered to call or visit to see how they are doing, fear that they will no longer have jobs when they are ready to return, and even anger at being ignored." (Atkinson 2009, p. 74)

IV) *Return-to-Work Programs*: One of the most important issues faced by an organization from a loss control standpoint is an injured employee's quickest possible return-to-work date. While an injured employee is unable to work, the company and the individual are losing assets and accruing detrimental costs. Therefore, it is imperative for an employer to make available numerous "light-duty" jobs for injured workers to perform until fully recovered.

The use of these four strategies will help to manage loss within an organization, and provide the best outcome in the event of an incident.

Communication throughout an Organization

Communication is a tool which can hinder an organization if used incorrectly, but can help an organization advance even more when used correctly (personal communication with K. Hildebrandt, July 6, 2009). It is essential for a company to establish multiple lines of communication, engaging as many employees as possible in the process (Levitt, 1993).

Means of communication. Communication is a key requirement for an effective incident response (Brown, 2008). There are three key means of fostering open communication, including: (I) Chain of Command, (II) Direct Contact System, and (III) Group Meetings (Levitt, 1993). Once these types of communication are understood an organization can successfully provide the right tools for all employees to communicate effectively.

I) *Chain of Command*: is a form of communication used to pass on information from upper levels of management through the line organization. In this system, "job-site managers communicate with supervisors under their direction who, in-turn, send the information on to their subordinates." (Levitt, 1993, pg.101) However, there must be other types of communication established within an organization to provide direct contact among upper management and the line organization; this is essential for an organization to perform.

II) *Direct Contact System*: creates interaction between all employees within an organization. In this line of communication, a manager is able to converse directly with any employee and receive the feedback from a personal standpoint instead of through a chain of individuals, such as foremen and superintendents.

III) *Group Meetings*: with either supervisory or trade personnel provide a means of communication with one specific group of employees. Throughout these interactions, those involved are able to brainstorm ideas with each other to create a solution. "A major benefit of group meetings is that they foster communication and cooperation among those attending the meeting." (Levitt, 1993, pg. 104)

These lines of communication are significant for employees to fully utilize their abilities and provide each other with fail-safe communication systems. The development of these systems within an organization is of high importance to gain successful communication strategies and outcomes.

Crossing communication barriers. Throughout an organization there are multiple levels of communication that must be utilized to get information across to all employees. "One of the major reasons for which many organizations fail to optimize on their resources is the absence of

a well-articulated and well-organized internal communication strategy." (Gingras 2005, p. 9) This strategy involves mitigating communication barriers, which interfere with the transmission and interpretation of ideas. It is imperative that communication barriers are breached for the optimal achievement of knowledge spread through the organization.

More often than not, managers within the organization want to communicate through a quantitative approach to show a success or failure rather than a narrative of what has occurred (personal communication with J. Dolezal, July 6, 2009). This is contributed to the fact that quantitative communication is easier to analyze and result in a quicker explanation in comparison to qualitative results. Adversely, laborers want to hear the success stories and learn what the organization has accomplished through hard work. Gingras (2005) found that, all employees, regardless of position, need to know what is happening in the company, what the objectives are, and what is expected by whom.

Communicating the incident. Communicating is an important key to performing a post-incident analysis. Upon forming the investigation team, open group communication should be used to discuss the incident. This team should include all employee(s) involved in the incident, first-line supervisory personnel, senior management, and safety management (Jacobs, 1989). Initially, the employee(s) involved in the incident should be able to present, without interruption, what exactly happened before, during, and after the incident took place. "Follow-up questions from all others should evoke explanations, not yes and no answers." (Jacobs, 1989, pg. 15) When the discussion is finished, the team interprets all included information and determines the causes of the incident and corrective actions associated with them.

The results of an incident analysis should be communicated in a timely manner, throughout an organization to the correct individuals. As stated by Jacobs (1989) it is the duties

of those involved in the analysis process to provide honest solutions to any employee who may benefit from the information and especially employees who may be susceptible to similar incidents. "The investigation team leader should follow up to ensure that all recommendations are put in to practice, and those involved in the incident should let the team leader know when corrective action is complete." (Jacobs, 1989, pg. 15)

Accountability and Ownership

"Accountability is a major area of importance that is normally neglected in the formulation of an accident prevention program." (Granados, 1992, pg. 18) Oftentimes it is associated with only the downfalls and developing problems within an organization. In most circumstances, accountability of a happening is more-so looked at when a negative occurrence arises then a positive one. To optimize ownership of accountability throughout an organization, both successes and failures must be determined equally important by each employee.

A successful accountability system. There are seven key ingredients of accountability: (I) Setting Goals, (II) Clarifying Expectations, (III) Defining Roles and Responsibilities, (IV) Monitoring Progress and Measuring Results, (V) Gathering Feedback, (VI) Formulating Action Goals, and (VII) Integrating Process Improvements (Zachary, 2005). Utilizing these key ingredients will create a successful accountability system within an entire organization.

I) *Setting Goals*: is necessary for defining parameters of the work to be accomplished and eliminating ambiguity of a task (Zachary 2005). Individual goals should remedy the organizational goals for the best possible outcome. Connors (2004) states that the goals set should be clear to all managers and other employees as the results trying to be reached.

II) *Clarifying Expectations*: "promotes accountability and focuses individual and collective energy and effort." (Zachary, 2005, pg. 18) All employees of an organization must have a clear understanding of what is expected regarding performance. Once clarified, all within the organization can focus efforts to strive to achieve the results desired.

III) *Defining Roles and Responsibilities*: ensures specific duties among employees are communicated and clearly assigned. Acceptance of responsibility for tasks performed promotes accountability and ownership among all individuals.

IV) *Monitoring Progresses and Measuring Results*: against standards of an organization provides the basis for evaluation and correction. The results determined show evidence of accountability through each task analyzed. "When progress is monitored personally, day-by-day, by the individual, it is a powerful tool for promoting learning insights and self-accountability." (Zachary, 2005, pg. 18)

V) *Gathering Feedback*: is vital for opening communication barriers about accountability amongst employees and supervisors. Positive and negative constructive feedback encourages ownership and guides positive influences for improvement (Williams, 2008).

VI) *Formulating Action Goals*: creates a continual improvement approach to proactively act on the results and feedback received. These goals drive accountability of processes in place and any changes made to them for improvement.

VII) *Integrating Process Improvements*: into the established organization norms encompasses all above ingredients into a successful accountability program.

Incorporating these seven accountability techniques into an organization enhances self-motivation and ownership of all employee performance. Accountability becomes a personal choice to rise above your circumstances and demonstrate the ownership necessary to achieve desired results as stated by Zachary (2005).

Relationship of line and staff management to accountability. The relationship to accountability has differing outlooks from line and staff management views. Staff management is considerably responsible for outlined safety responsibilities of managers and supervisory personnel states Granados (1992). These individuals are accountable for providing advice and service to those who are in line of direct accomplishment of objectives (Allen, 1982). However, they are not in the most influential position to oversee safety in the work place.

The function of line management is to be in the position to oversee all processes and procedures within an organization and work directly with employees performing these tasks. "These individuals will be instrumental in the success or failure of an organizations safety endeavors." (Granados, 1992, pg. 18) The need for line management to incorporate accountability for employee actions is pertinent to an organization since they are in the best position available to do so. Both line and staff management has specific roles they must carry out for an organization to perform at its best potential. Accountability is a necessity and must be exercised through these roles and efforts.

Conclusion

The purpose of the review of literature was to interpret information from available resources and current analyses procedures which relate to performing and implementing a post-incident analysis procedure within an organization. The information gathered from the literature review best explains the need for managing, communicating, and determining accountability

throughout an incident analysis. The next chapter includes the methodology which provides in detail the study performed.

Chapter III: Methodology

It is pertinent that an organization use as much available information as possible to try and rid the occurrence of a loss within. A great sum of this information can be attained by performing a post-incident analysis, in which a company is able to identify the root causes of an incident. This, in turn, can be used as knowledge communicated throughout to proactively rid a reoccurrence of the incident. It is the goal of this research to identify the most effective post-incident analysis guidelines and process suitable for ABC Construction. This research also aims to find the best corrective action methods, and accountability and disciplinary action measures as a result of the findings from the post-incident analysis.

Implementation of the Analysis

A formal IRAAS was written based on the current methods and practices found within the previous research performed. This process includes the use of a standardized form derived from previous research. The IRAAS will require the management team to review each incident on a case-by-case basis with the goal of discovering both "contributing" and "root" causes to the incident. Information gathered during the analysis process will be used to develop systems, procedures, and policies that are designed to prevent the reoccurrence of future incidents. Corrective actions for each cause found will be determined and followed through on. If deemed appropriate, and based on the results of the analysis process, disciplinary action will be administered accordingly. Upon the consistent use by all and the knowledge acquired from each analysis, all processes will become as safe as possible and losses will decrease with time.

Report Selection and Description

The IRAAS was introduced into the safety management system at ABC Construction in June of 2009. Since the date of implementation, each incident has been analyzed with the IRAAS and documentation retained by the use of the standardized form.

To perform this study, a sample of random IRAAS's was analyzed to determine the effectiveness of the analysis system. Each section of the IRAAS was analyzed in different aspects specific to the particular information found. The analysis techniques for the sections were composed as follows:

1. The date of an IRAAS performed was compared to the date of the initial injury occurrence and determined to be timely or not timely.
2. Quantitative analysis was performed on sections which could only offer being "filled in" or "not filled in".
3. Determination of specific targets to be identified in certain sections were analyzed
4. Sections which required the user of the IRAAS to "circle an answer" were analyzed by quantitative measures.
5. The study utilized a method of rating specific sections on a scale of 1 through 5. This scale, known as the Likert scale, is used to determine a level of opinion; in this case considering the completeness of answers in a given section.

The study performed examined five sections of data on the IRAAS form including: I) Follow-up Meeting Information, II) Incident Description, III) Determining Which Basic Causes Contributed to the Incident, IV) Employee Conditions, and V) Corrective Actions. Sections I and V were analyzed using a method to count which fields were "filled in" or "not filled in" for each specific section. A similar data collection technique was used for section IV, which included a counting method for each employee condition circled.

Sections II and III were analyzed using a scale to conclude the level of completeness in the answers given for specific fields. Within this section, a data collection method was also used to determine if specific hazard targets were identified within answers given.

Data Analysis

Descriptive statistics were used to evaluate and group data accordingly. The instrument acquired this data from the following four techniques: a method of rating answers in regard to a scale after analyzing all aspects of the possible information needed in a specific section, a method to determine adequacy of necessary hazard targets identified, determination of if the IRAAS form was filled out within a timely manner in regard to the date of the incident, and a collection of data method derived from "filled in" or "not filled in" sections on the IRAAS form.

A Likert scale was applied in conjunction with section II questions which a rating of answers was intended, creating a method of using descriptive statistics for analysis of the entire group. This scale consisted of the following values in association with numerical values: 1 – Not Filled Out, 2 – Little Information Given, 3 – Basic Information Given, 4 – Adequate Information Given, 5 – Information Answers Questions Completely.

The values from the scale indicate if specific sections of the IRAAS forms are filled out adequately to express pertinent data about an incident description and result of the incident. This information will provide percentages of each value which will then be compared to each other. The comparison will determine the effectiveness of the descriptive answers given on the IRAAS form.

Before receiving the IRAAS forms to be analyzed, all pertinent demographic and personal information was taken off each form by ABC Construction to rid the issue of any

identification of an individual associated with the form. These forms hold confidentiality and have no specific data tied to any employee of ABC Construction.

Limitations

The study poses some limitations for the IRAAS forms received from ABC Construction to use for analysis. These limitations include:

- Only a limited number of IRAAS forms can be receive for use in analytical methods.
- Multiple risk control managers at ABC Construction conducted the process to fill out the IRAAS forms. Each may have a possible different understanding of adequacy of information written.
- Time constraints of those involved in the IRAAS process may cause the form to be filled out inadequately if conditions for adequate time were not available.
- Information of the forms is based off of the truthfulness of feedback from the employee involved in the accident.

Chapter IV: Results and Discussion

Purpose of the Study

It was the intention of this study to develop a post-incident analysis procedure that would assist in the systematic management of risk exposure stemming from accidents/near misses at the ABC Construction organization. The research performed determined guidelines and procedures necessary to maximize the potential for preventing a reoccurrence of loss.

Presentation of Collected Data

For the study of post-incident analysis procedures, research was based on a three-page IRAAS form used by ABC Construction. The form contains five sections of information in the categories of (as named on the IRAAS form):

I) "Follow-up Meeting Information"

II) "Incident Description"

III) "Determine Which Basic Causes Contributed to the Incident"

IV) "Employee Conditions"

V) "Pre Task Planning"

The researcher received 10 IRAAS forms with pre-existing data to analyze from ABC Construction. These forms were received on November 16, 2009, containing information between the dates of June 1, 2009 through November 11, 2009.

Results

The methodology used to perform the study included several techniques to determine the effectiveness of the IRAAS form. The five techniques utilized are outlined as follows: identification of the timeliness for the form being filled out, analyzing specific sections which could only offer being "filled in" or "not filled in", analyzing specific targets which posed as

potential victims of the incident, analysis of answers circled to determine conditions of the employee, and use of a rating scale to determine adequacy of information provided.

Technique 1 – Analyzing Timeliness

The first technique analyzed the amount of time between the date of the incident and the date of the IRAAS being performed (see Appendix A for raw data). If the date of the IRAAS was within one week of the date of the incident then it was considered a timely analysis. If more time was taken to perform the IRAAS then it was considered a not timely analysis. The results are shown in Figure 1.

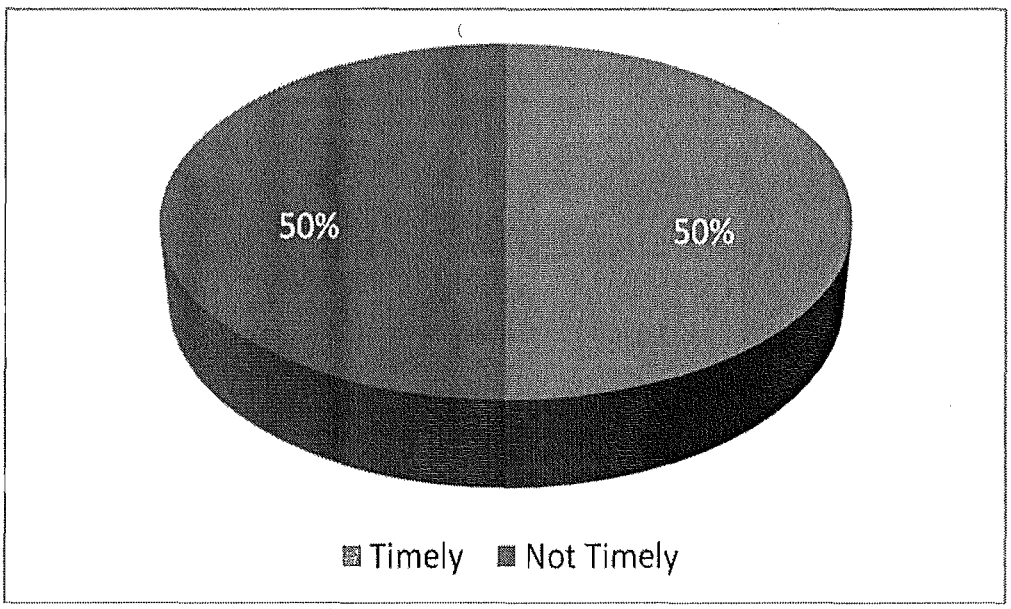

Figure 1. Timeliness of Analysis

Timeliness of the analysis is pertinent to identify the most information about what happened prior, during, and after the incident occurred. Critical information can be lost in mind the farther apart the analysis happens from the incident. For instance, one IRAAS identified an injury to an employee which occurred outside the workplace. Since the IRAAS was filled out in a timely manner, a potential claim did not occur and the injury was taken care of appropriately. This happening displays the importance of the IRAAS and timeliness of the analysis.

Technique 2 – Fields "filled in" or "not filled in"

The second technique used to analyze the IRAAS form looked at fields within the form and determined if they were "filled in" or "not filled in". The information provided in Section I of the form is used to classify the incident in the following fields (see Appendix A for the raw data):

- Specific jobsite and location on the jobsite the work was being performed
- Indications of weather and time of the incident
- The total estimated cost of the incident including any equipment, personnel, or product that has been affected as a result. Also, an
- The total estimated cost to prevent the incident

It was found if sections were "filled in" (yes) or "not filled in" (no). The results are shown in Figure 2.

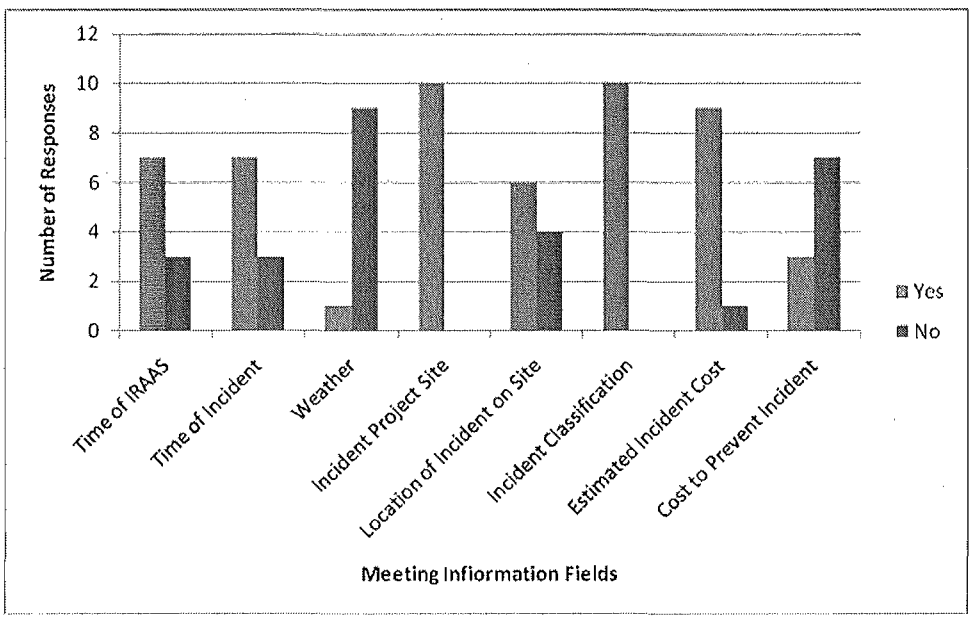

Figure 2. Information Filled Out or Not Filled Out

It was the intent of the IRAAS for all fields to be filled in to gain the best information possible from the form. If the fields are not filled out or discussed during the IRAAS process, no information can be used to analyze the effectiveness of the tool.

The other section which was analyzed by if sections were "filled out" or "not filled out" was the identification of corrective actions. These corrective actions were identified by action taken, responsible party for performing the action, and timeliness of the action to be performed. The results are shown in Figure 3 (see Appendix A for all the raw data).

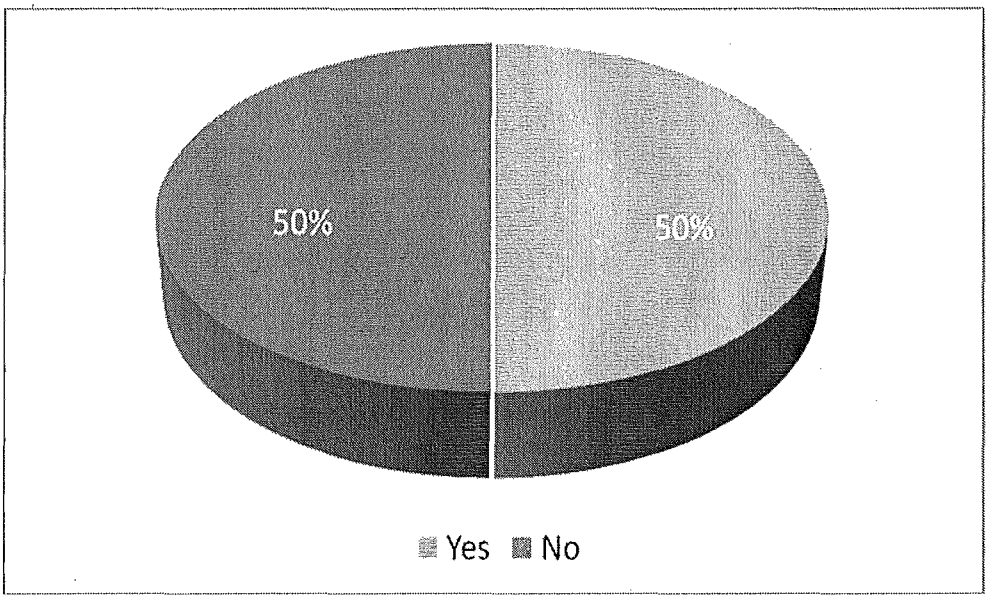

Figure 3. Corrective Actions

The results from forms analyzed determined that 50% show corrective action measures to be implemented.

Technique 3 – Identification of Targets

The third technique chosen was used to identify targets which were affected by the incident (see Appendix A for all the raw data). The targets considered in the IRAAS were: injured employees, equipment damage, and schedule setbacks. (see Figure 4)

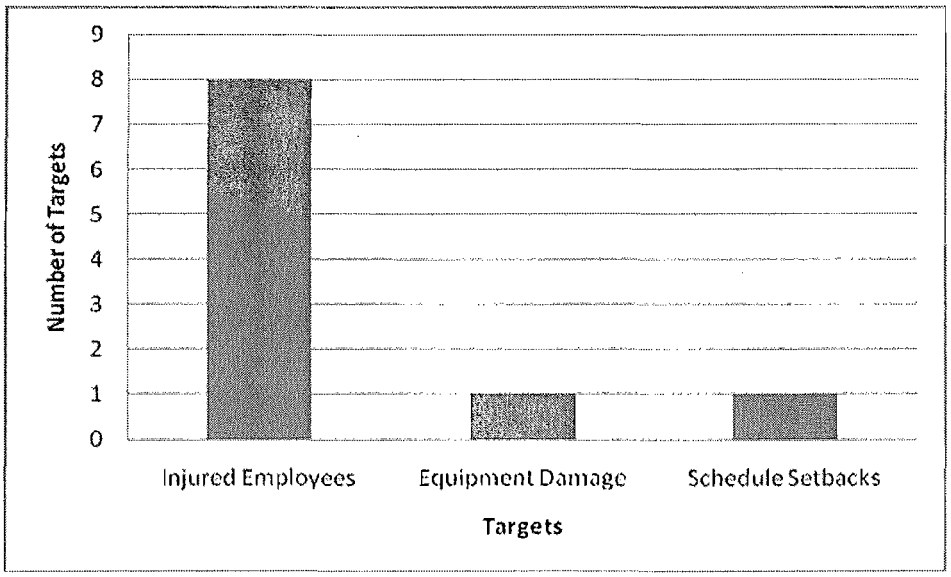

Figure 4. Targets Affected

Targets were identified on each IRAAS form analyzed for the study. "Injured employees" was the category shown to be the most affected out of all targets. A significantly less indication of equipment damage and schedule setbacks were found as victims of the incident.

Technique 4 – Identifying Employee Conditions

The fourth technique determined which employee conditions contributed to the incident from the categories of mental state, critical errors, and prevention of a recurrence. Each category has four choices which were intended to be circled by those conducting the IRAAS process (see Appendix A for all the raw data). Single or multiple choices from each category could be selected to show all contributing employee conditions.

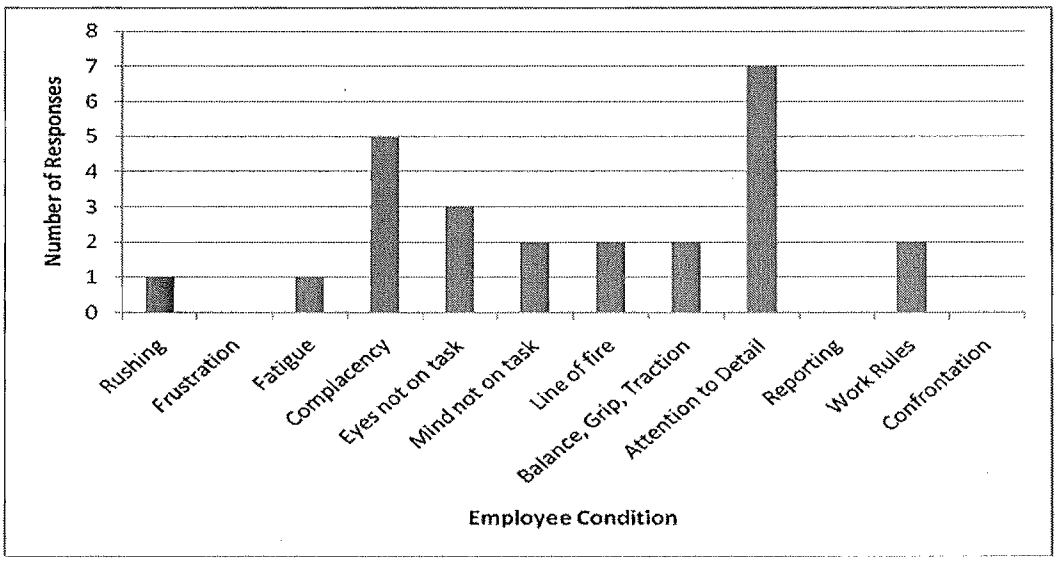

Figure 5. Contributing Conditions

Technique 5 – Itemized Rating Scale

The fifth technique to analyze the research instrument utilized a rating scale to determine the completeness of answers for section two and section three of the IRAAS form. In section two of the IRAAS form, the description of the incident was provided (see Appendix A for all the raw data). The results are found in Table 1.

Table 1: Incident Description

Rating Scale	Response Total	Response Percent
1 – Not Filled Out	0	0%
2 – Little Information Given	3	30%
3 – Basic Information Given	3	30%
4 – Adequate Information Given	2	20%
5 – Information Answers Question Completely	2	20%

The other section analyzed uses the same rating scale to determine the completeness of answers provided about contributing causes of the incident found in Table 2. Ten categories of basic causes were used on the IRAAS form to include: knowledge; employee placement; safe

practice enforcement; feedback system; design/construction; jobsite conditions; personal protective equipment; inspection, maintenance, and purchasing; established method/procedures; and pre task planning (see Appendix A for all the raw data).

Table 2: Basic Cause

	Not Filled Out 1	Little Information Given 2	Basic Information Given 3	Adequate Information Given 4	Information Answers Question Completely 5
Knowledge	10% (1)	50% (5)	20% (2)	10% (1)	10% (1)
Employee Placement	20% (2)	40% (4)	20% (2)	0% (0)	20% (2)
Safe Practice Enforcement	20% (2)	30% (3)	20% (2)	10% (1)	20% (2)
Feedback System	20% (2)	40% (4)	10% (1)	20% (2)	10% (1)
Design/Construction	10% (1)	40% (4)	20% (2)	20% (2)	10% (1)
Jobsite Conditions	20% (2)	10% (1)	40% (4)	20% (2)	10% (1)
Personal Protective Equipment	20% (2)	20% (2)	50% (5)	10% (1)	0% (0)
Inspection, Maintenance, and Purchasing	30% (3)	50% (5)	10% (1)	10% (1)	0% (0)
Established Method/ Procedures	20% (2)	40% (4)	40% (4)	0% (0)	0% (0)
Pre Task Planning	20% (2)	20% (2)	20% (2)	30% (3)	10% (1)

Chapter V: Conclusions and Recommendations

It was the intention of this study to develop a post-incident analysis procedure that would assist in the systematic management of risk exposure stemming from accidents/near misses at the ABC Construction organization. The research performed determined guidelines and procedures necessary to maximize the potential for preventing a reoccurrence of loss. An IRAAS standardized form and investigation process were created and derived from these findings. The IRAAS process was implemented into ABC Construction in June 2009. A random sample of IRAAS forms filled out between the dates of June 1, 2009 and November 11, 2009 were analyzed and evaluated by various techniques to determine the effectiveness of the IRAAS forms.

The first part of this chapter discusses conclusions derived from the results found in Chapter IV. Subsequent parts of this chapter provide recommendations not only to improve the IRAAS form and investigation process but also for conducting future research.

Conclusions

There are multiple concerns stemming from the analysis of the sample of IRAAS forms. First, the effectiveness of the form cannot be identified if the forms do not contain adequate information. Multiple sections of each form did not contain any information which leaves the researcher to believe the section was not discussed during the IRAAS meeting or that no applicable information to that section existed. However, each section must contain something written to show the topic was discussed; if the section was not applicable to the situation then it should be stated as such.

The quality of information provided on the forms directly correlates with the determination of its effectiveness. The detail of writing on the forms should be simplistic in

nature. However, many of the forms did not contain adequate information to analyze. Many sections of the forms contained short answers such as yes or no without any information for explanation. Answers such as yes or no should be stated, but then some extent of elaboration to what was discussed during the IRAAS meeting should follow.

The intent of the IRAAS process is to provide insight about an incident to identify multiple potential causes of the incident. Upon identifying potential causes, corrective action measures are then to be identified to control risks and hazards associated with the incident. The researcher determined most information provided about causes of an incident to be minimal or basic information. With minimal information supplied about causes of the incident, minimal or no corrective actions can be identified for controls or countermeasures. The results show that 50% of the filled out IRAAS forms identified at least one corrective action. Such an inadequacy of corrective actions identified will surely not prevent a recurrence of an incident; which is the intent of the IRAAS.

The explanation of the IRAAS (found in Appendix B) outlines the purpose, execution techniques, and information to be obtained through the process. However, there is no training which is provided to those conducting an IRAAS at ABC Construction. Through the analysis of the sample of IRAAS forms, it has been concluded by the researcher that the written procedures to guide those conducting an IRAAS are not effective and are inadequate. As well, through communication with the safety director at ABC Construction, there is a lack of ambition and motivation by safety managers to conduct these IRAAS meetings. This may be a large contributing factor for inadequate information provided on the IRAAS forms.

From analysis of the IRAAS forms the researcher found that document control of the IRAAS forms is not completely sufficient. Once the IRAAS meeting is over, the safety manager

conducting the meeting retains the filled out IRAAS form and must transfer all information onto an electronic document. The electronic document is put into a company wide database for all safety mangers to have access of the document. The hand written form must be sent to the ABC Construction corporate office to be filed. The actual IRAAS forms provided by ABC Construction for the study were mainly completed on a word processor, however, some were in hand written form. According to the safety director at ABC Construction, the forms provided in hand written form were therefore never converted onto a word-processed document. These forms must be put into the electronic database as it is important for this information to be shared with all safety managers.

Recommendations for the Current Study

The conclusions above have provided the researcher with information to determine recommendations to improve the IRAAS form and process in its entirety. Recommendations include the following main points:

- Sections must be filled in with elaborate answers provided,
- Corrective actions must be identified and followed through to completion,
- Training must be provided to all safety managers on the use of the IRAAS form and process,
- The IRAAS process must be integrated into the safety management system and motivation of the use must be increased

Sections must be filled in with elaborate answers provided. It has been concluded from the results of the study, the level of incompleteness of forms filled out during an IRAAS meeting. The researcher recommends the emphasis of forms being filled out correctly and elaborately must be advised by the safety director to all safety managers employed by ABC

Construction. Thus, the importance of this issue must be addressed immediately for the IRAAS process to be effective. Without providing or discussing all information on the IRAAS form, the process may be found to be a waste of time.

Corrective actions must be identified and followed through. The recommendation to further assess corrective actions to prevent the recurrence of the incident must be made. Corrective action measures must be found in order to control hazards and risks associated with a task which could potentially cause an incident. An acceptable level of risk must be determined by the safety management team which will present the depth of controls and countermeasures needed for mitigation and prevention of an incident to occur. The corrective actions identified must also be followed through with by the appropriate employee and in a significant period of time.

Training must be provided to all safety managers on the use of the IRAAS form and process. The researcher recommends the use of training for all employees using the IRAAS form and conducting an IRAAS meeting. Training must include at a minimum the proper execution of conducting an IRAAS meeting with particular attention paid to the adequacy of information discussed. To further improve the potential of the process, the researcher suggests training to include measures to identify corrective actions for multiple applicable scenarios.

The IRAAS process must be integrated into the safety management system and motivation of the use must be increased. To better the results from the IRAAS process, the researcher recommends integrating the IRAAS into the safety management system at ABC Construction. Making the process a standard to follow after an incident has occurred will increase the motivation to perform the task as it will be engrained into the safety manager's job description. Ultimately, there will be no lack of ambition or commitment to perform the IRAAS otherwise.

Overall there are multiple management practices which need to be in place for the IRAAS to function adequately. A full understanding of the IRAAS process and form must be provided to all safety managers by means of training and advisement. All sections of the form must be filled out with elaborate information given; this would be explained through the training provided. Identification and follow through of corrective actions must be performed for preventing the recurrence of an incident. Most importantly the IRAAS must become part of the standard safety policies and procedures through integration into the current safety management system at ABC Construction.

Recommendations for Further Study

If future studies are conducted to determine the effectiveness of the IRAAS process for ABC Construction, there are two areas which could be included. The issue of reallocation of costs resulting from an incident to profit centers of ABC Construction may be researched and determined from the findings of the incident. Another area for future research may include identification of the best technique to integrate the IRAAS into a total management system.

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Incident Review Analysis and Accountability System (IRAAS)

The purpose of the Incident Analysis is to focus on system changes necessary to prevent a similar type incident from ever occurring again on a Miron project site.

I. Follow-up Meeting Information

Date of incident:	07/23/2009	Time of Incident:	10:00AM / PM
Incident Project Site:	St. Elizabeth church	Date of Follow-up:	08/03/2009
Location of Incident on Site:	1350 Lynhurst Dr. Hiawatha, Iowa 52233		
Involved Employee(s):			
Miron Superintendent:			
Miron Project Manager			
Incident Classification:	Near Miss		
Estimated Incident Cost:	$N/A		
Prepared By:			
Attendees:			

II. Incident Description

Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	**was using their Link-Belt crane(80ton) to move a 15,000# truss. The operator lifted one end of the truss approximately four feet off the ground, in an attempt to put dunnage underneath. As the operator began to lower the truss, his brake failed and dropped the beam.** **After calling the / mechanic, it was suggested to get a second opinion on what caused the brake to fail. sent a mechanic to assess the situation. He determined that the drum had glazed over, causing the brake to slip.** **After de-glazing the brake pads, the brakes worked as they should, the truss was then set with no further problems.**
Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	**There were no injuries or equipment damage.** **There was a one day setback as a result of this incident.**

Incident Review Analysis and Accountability System (IRAAS)

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	No.
2. Employee Placement: Is the worker physically mismatched for the job? (A person with a known back injury lifting heavy weights)	N/A
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	N/A
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	N/A
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high risk products, inadequate guarding, or poor access.	N/A
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	N/A
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	N/A
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	Checking the drum is not a daily inspection item. inspects this on a yearly routine. Brake was glazed over
9. Established Method/Procedures: Does the current best method expose the worker to a risk?	N/A

Incident Review Analysis and Accountability System (IRAAS)

10. Pre Task Planning: Would the incident have been prevented if the risks were identified on the Pre-Task Plan?	No-- y now plans on inspecting the drum and braking system every two months as a result of this incident.

IV. Employee Conditions

MENTAL STATE(S) (CIRCLE ONE OR MORE)			
Rushing	Frustration	Fatigue	Complacency
CRITICAL ERROR(S) (CIRCLE ONE OR MORE)			
Eyes Not on Task	Mind Not on Task	Line of fire	Balance, Grip, Traction
What might prevent a recurrence in the future (CIRCLE ONE OR MORE)			
Attention to detail	Reporting	Work Rules	Confrontation

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on fixing things permanently.

Action	Who	By When
Should this incident be shared with all Miron Employees?	Operators/mechanics	Immediately
will now start to inspect on a two month interval	Mechanic	2 month interval

Incident Review Analysis and Accountability System (IRAAS)

The purpose of the Incident Analysis is to focus on system changes necessary to prevent a similar type incident from ever occurring again on a Miron project site.

I. Follow-up Meeting Information

Date of incident:		Time of Incident:	AM / PM
Incident Project Site:	Milwaukee Job Corp.	Date of Follow-up:	n/a
Location of Incident on Site:	East side of the gymnasium building, at the far north end.		
Involved Employee(s):			
Miron Superintendent:			
Miron Project Manager:			
Incident Classification:			
Estimated Incident Cost:	$2500.00 (potential for future)		
Prepared By:			
Attendees:			

II. Incident Description

Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	An excessive amount of water and mud had pooled in the ironworkers lay-down area as a result of weekend rains. While traveling in the area the injured employee slip and fell in the mud. The compression from hitting the ground caused his jaw to slam thus breaking his tooth in half. The issue of water and mud had been previously discussed with the site superintendent. However, the word adequate lay-down area for both the ironworkers and crane set-up was debated.
Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	The injured employee picked his tooth up out of the mud, returned to the equipment trailer and threw it on the table. He continued to work the rest of the day and until he could get to the dentist for treatment.

Incident Review Analysis and Accountability System (IRAAS)

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	No, in fact the employee and supervisor are very well versed on the requirements for adequate lay-down areas under the steel erection standards.
2. Employee Placement: Is the worker physically mismatched for the job? (A person with a known back injury lifting heavy weights)	No, the employee abilities and ethics prevented the injury from becoming a large or more costly issue.
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	Yes, an adequate lay-down area was not provided. Thus allowing for proper draining of the work area per the OSHA standards.
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	Yes, the issue of a proper lay-down area had been discussed with the site superintendent prior to the incident.
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high risk products, inadequate guarding, or poor access.	Yes, the site lends itself to continued problems for the accumulation of water and or mud.
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	Yes, the condition of the area directly attributed to this incident. While rare this was an unsafe condition not act on the employees' part.
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	No,
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	Yes,
9. Established Method/Procedures: Does the current best method expose the worker to a risk?	No,

Incident Review Analysis and Accountability System (IRAAS)

10. Pre Task Planning: Would the incident have been prevented if the risks were identified on the Pre-Task Plan?	No, the issue was discussed in detail. Follow-thru could have prevented the incident.

IV. Employee Conditions

MENTAL STATE(S) (CIRCLE ONE OR MORE)			
Rushing	Frustration	Fatigue	Complacency
CRITICAL ERROR(S) (CIRCLE ONE OR MORE)			
Eyes Not on Task	Mind Not on Task	Line of fire	Balance, Grip, Traction
What might prevent a recurrence in the future (CIRCLE ONE OR MORE)			
(Attention to detail)	Reporting	(Work Rules)	Confrontation

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on fixing things permanently.

Action	Who	By When
Should this incident be shared with all Miron Employees?	Yes Site & Area Supervisors	Express S. The Incident

Incident Review Analysis and Accountability System (IRAAS)

The purpose of the Incident Analysis is to focus on system changes necessary to prevent a similar type incident from ever occurring again on a Miron project site.

I. Follow-up Meeting Information

Date of IRAAS:	9-24-09 3:00 PM	Time of IRAAS:	9-24-09 AM / PM
Date of incident:	9-21-09	Time of Incident:	1130 AM / PM
Incident Project Site:	WALCONET WWTF.	Weather: Rain/Sunny/Cloudy/Snow/Ice	
Location of Incident on Site:	AERATION	Temperature 75°	Wind Speed SW.
Involved Employee(s):			
Miron Superintendent:			
Miron General Superintendent:			
Miron Project Manager:			
Miron Project Executive:			
Miron Supervisor Taking Injured Employee to Hospital:			
Incident Classification:	FALL FROM SCAFFOLD.		
Estimated Incident Cost:	$ 5000.00		
Cost to Prevent Incident:	$		
Prepared By:			
Attendees:			

II. Incident Description

Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	EMPLOYEE WAS WORKING ON A 3½ FOOT HIGH SCAFFOLDING. WHILE LAYING BRICK AND FOAM ON A STAGEWELL WALL HE STEPPED OFF THE END OF THE SCAFFOLD.
Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	EMPLOYEE RETURN TO WORK THE FOLLOWING DAY W/ A 10 lb. LIFTING RESTRICTION. A STRAINED BACK AND CUT HEAD WERE THE RESULT.

Incident Review Analysis and Accountability System (IRAAS)

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	Employee "no".
2. Employee Placement: Is the worker physically mismatched for the job? For example: a person with a known back injury lifting heavy weights.	NO!!
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	Rails should have been in place. They took it down, but could have got the work done w/ it.
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high-risk products, inadequate guarding, or poor access.	Poor access
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	Site didn't create a problem. Several. Area was very tight.
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	NO//
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	NO.
9. Established Method/Procedures: Does the current best method expose the worker to a risk?	NO//
10. Pre-task Planning: Would the incident have been prevented if the risks were identified on the Pre-task Plan?	NOT DONE

Incident Review Analysis and Accountability System (IRAAS)

IV. Employee Conditions

MENTAL STATE(S) (CIRCLE ONE OR MORE)			
Rushing	Frustration	Fatigue	Complacency
CRITICAL ERROR(S) (CIRCLE ONE OR MORE)			
Eyes Not on Task	Mind Not on Task	Line of Fire	Balance, Grip, Traction
What might prevent a recurrence in the future (CIRCLE ONE OR MORE)			
Attention to Detail	Reporting	Work Rules	Confrontation

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on permanently resolving the issue.

Action	Who	By When
Should this incident be shared with all Miron Employees?		

Incident Review Analysis and Accountability System (IRAAS)

The purpose of the Incident Analysis is to focus on system changes necessary to prevent a similar type incident from ever occurring again on a Miron project site.

I. Follow-up Meeting Information

Date of IRAAS:	11-5-2009	Time of IRAAS:	**3:30 PM**
Date of incident:	10-28 -	Time of Incident:	~~10~~ 10 AM / PM
Incident Project Site:	Mosmee	Weather: Rain/Sunny/Cloudy/Snow/Ice	
Location of Incident on Site:	#3 slusher	Temperature ___	Wind Speed ___
Involved Employee(s):	[redacted]		
Miron Superintendent:	[redacted]		
Miron General Superintendent:	N/A		
Miron Project Manager:	[redacted]		
Miron Project Executive:	[redacted]		
Miron Supervisor Taking Injured Employee to Hospital:	E[redacted]		
Incident Classification:	Laceration ~~Non~~ Recordable		
Estimated Incident Cost:	$ 500		
Cost to Prevent Incident:	$ 0-10		
Prepared By:	Ma[redacted]		
Attendees:	F[redacted] W[redacted]		

II. Incident Description

* Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	Applying duct tape to ply wood form - #3 slusher sove plate grout fourm, Stanely knife cut duct tape.
Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	laceration to employees right middle fingur - 1/2" long

Incident Review Analysis and Accountability System (IRAAS)

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	No, – Glove drawer
2. Employee Placement: Is the worker physically mismatched for the job? For example: a person with a known back injury lifting heavy weights.	No!
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	Yes, No gloves
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	Speed always a factor No eth pressure
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high-risk products, inadequate guarding, or poor access.	No-
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	No
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	Glove – missing Glove choices from Yard
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	Different Glove – cut resistant.
9. Established Method/Procedures: Does the current best method expose the worker to a risk?	No
10. Pre-task Planning: Would the incident have been prevented if the risks were identified on the Pre-task Plan?	One Pretask – 30 guys

Incident Review Analysis and Accountability System (IRAAS)

IV. Employee Conditions

MENTAL STATE(S) (CIRCLE ONE OR MORE)			
Rushing	Frustration	Fatigue	Complacency
CRITICAL ERROR(S) (CIRCLE ONE OR MORE)			
Eyes Not on Task	Mind Not on Task	Line of Fire	Balance, Grip, Traction
What might prevent a recurrence in the future (CIRCLE ONE OR MORE)			
Attention to Detail	Reporting	Work Rules	Confrontation

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on permanently resolving the issue.

Action	Who	By When
Should this incident be shared with all Miron Employees?	Yes, Messenger	~~Yesterday~~ Today
Should disciplinary action be taken?		

Employee Signature: _____

Project Manager: _____

Risk Control Manager: _____

Incident Review Analysis and Accountability System (IRAAS)

The purpose of the Incident Analysis is to focus on system changes necessary to prevent a similar type incident from ever occurring again on a Miron project site.

I. Follow-up Meeting Information

Date of IRAAS:	July 14, 2009	Time of IRAAS:	3:30 **PM**
Date of incident:	July 7, 2009	Time of Incident:	1:00 **PM**
Incident Project Site:	NTC –Bathroom	Weather: Rain/Sunny/Cloudy/Snow/Ice	
Location of Incident on Site:		Temperature _NA Wind Speed _NA	
Involved Employee(s):			
Miron Superintendent:			
Miron General Superintendent:			
Miron Project Manager:			
Miron Project Executive:			
Miron Supervisor Taking Injured Employee to Hospital:			
Incident Classification:	Recordable – Back Strain		
Estimated Incident Cost:	$ 2,500-5,000		
Cost to Prevent Incident:	$ Minimal		
Prepared By:			
Attendees:			

II. Incident Description

Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	Employee was loading 5'x5' toilet partitions (approx. 80 lbs each) with another employee, onto a drywall cart to be removed from building. The employee was standing stationary and bending and twisting to lift the partitions onto the cart.
Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	When the employee turned and lifted one of the partitions he felt his back get tight. When the employee went to the clinic the next morning he was diagnosed with a back strain and his right side was swollen.

Incident Review Analysis and Accountability System (IRAAS)

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	Yes – Employee had not attended the Workstrong training course at the time of the injury.
2. Employee Placement: Is the worker physically mismatched for the job? For example: a person with a known back injury lifting heavy weights.	No – No known back injuries prior to incident.
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	No
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	Possibly – Job has a tight schedule and employees were working longer hours to keep on schedule. May have been overlooking proper lifting techniques.
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high-risk products, inadequate guarding, or poor access.	No
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	Good lighting, level work surface, general demolition debris around jobsite.
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	PPE worn at time of incident: Hardhat, safety glasses, gloves, work boots, long sleeve shirts.
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	No
9. Established Method/Procedures: Does the current best method expose the worker to a risk?	Maybe – Removing material by hand/cart. Two person lifting techniques were used.
10. Pre-task Planning: Would the incident have been prevented if the risks were identified on the Pre-task Plan?	Possibly – Specific stretches could be done when heaving lifting is to be done. Lifting routes/techniques discussed before loading.

Incident Review Analysis and Accountability System (IRAAS)

IV. Employee Conditions

MENTAL STATE(S) (CIRCLE ONE OR MORE)			
Rushing	Frustration	**Fatigue**	Complacency
CRITICAL ERROR(S) (CIRCLE ONE OR MORE)			
Eyes Not on Task	Mind Not on Task	Line of Fire	Balance, Grip, Traction
What might prevent a recurrence in the future (CIRCLE ONE OR MORE)			
Attention to Detail	Reporting	Work Rules	Confrontation

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on permanently resolving the issue.

Action	Who	By When
Should this incident be shared with all Miron Employees?	All miron employees – The Messenger	Next Available
Employee to attend Workstrong Class		Next Available
3 month follow-up requested		Oct. 15th

Employee to Lawyer for Workers Comp Company

Incident Review Analysis and Accountability System (IRAAS)

The purpose of the IRAAS is to focus on systemic changes necessary to prevent the reoccurrence of the situation.

I. Follow-up Meeting Information

Date of incident:	June 2, 2009	Time of Incident:	1:30 PM
Incident Project Site:	[redacted] Office Expansion	Date of Follow-up:	
Location of Incident on Site:			
Involved Employee(s):			
Miron Superintendent:			
Miron Project Manager:			
Incident Classificatior	Foot Sprain Strain - foot		
Estimated Incident Cost:	$5,000		
Prepared By:			
Attendees:			

II. Incident Description

Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	**[redacted] was descending a step ladder when he felt a strain in lower foot**
Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	**Recordable injury**

Incident Review Analysis and Accountability System (IRAAS)

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	
2. Employee Placement: Is the worker physically mismatched for the job? (A person with a known back injury lifting heavy weights)	
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high risk products, inadequate guarding, or poor access.	
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	
9. Established Method/Procedures: Does the current best method expose the worker to a risk?	
10. Pre Task Planning: Would the incident have been prevented if the risks were identified on the Pre-Task Plan?	

Incident Review Analysis and Accountability System (IRAAS)

IV. Employee Conditions

MENTAL STATE(S) (CIRCLE ONE OR MORE)			
Rushing	Frustration	Fatigue	Complacency
CRITICAL ERROR(S) (CIRCLE ONE OR MORE)			
Eyes Not on Task	Mind Not on Task	Line of fire	Balance, Grip, Traction
What might prevent a recurrence in the future (CIRCLE ONE OR MORE)			
Attention to detail	Reporting	Work Rules	Confrontation

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on fixing things permanently.

Action	Who	By When
Should this incident be shared with all Miron Employees?		

Incident Review Analysis and Accountability System (IRAAS)

The purpose of the Incident Analysis is to focus on system changes necessary to prevent a similar type incident from ever occurring again on a Miron project site.

I. Follow-up Meeting Information

Date of IRAAS:	October 15, 2009	Time of IRAAS:	4:00 PM
Date of incident:	October 14, 2009	Time of Incident:	AM / PM
Incident Project Site:	[redacted] Buildout	Weather: Rain/Sunny/Cloudy/Snow/Ice	
Location of Incident on Site:	Hallway	Temperature ___ Wind Speed ___	
Involved Employee(s):	[redacted]		
Miron Superintendent:	[redacted]		
Miron General Superintendent:	[redacted]		
Miron Project Manager:	[redacted]		
Miron Project Executive:	[redacted]		
Miron Supervisor Taking Injured Employee to Hospital:	[redacted]		
Incident Classification:	Laceration		
Estimated Incident Cost:	$2,000		
Cost to Prevent Incident:	$0		
Prepared By:	[redacted]		
Attendees:	[redacted]		

II. Incident Description

Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	**Cut metal stud sides and folded stud over to remove door frame. When the metal studs were folded they created a sharp point.**

Incident Review Analysis and Accountability System (IRAAS)

Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	**Laceration to employees right wrist – recordable incident**

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	No
2. Employee Placement: Is the worker physically mismatched for the job? For example: a person with a known back injury lifting heavy weights.	
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	Tight Area
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high-risk products, inadequate guarding, or poor access.	Clearance
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	

Incident Review Analysis and Accountability System (IRAAS)

9. Established Method/Procedures: Does the current best method expose the worker to a risk?	
10. Pre-task Planning: Would the incident have been prevented if the risks were identified on the Pre-task Plan?	

IV. Employee Conditions

MENTAL STATE(S) (CIRCLE ONE OR MORE)			
Rushing	Frustration	Fatigue	Complacency
CRITICAL ERROR(S) (CIRCLE ONE OR MORE)			
Eyes Not on Task	Mind Not on Task	**Line of Fire**	Balance, Grip, Traction
What might prevent a recurrence in the future (CIRCLE ONE OR MORE)			
Attention to Detail	Reporting	Work Rules	Confrontation

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on permanently resolving the issue.

Action	Who	By When
Should this incident be shared with all Miron Employees?	Yes	

Incident Review Analysis and Accountability System (IRAAS)

The purpose of the Incident Analysis is to focus on system changes necessary to prevent a similar type incident from ever occurring again on a Miron project site.

I. Follow-up Meeting Information

Date of incident:	6-1-09	Time of Incident:	9:30 AM
Incident Project Site:	[redacted]	Date of Follow-up:	6-23-09 9:00 a.m.
Location of Incident on Site:	Stock Process #93 Wet Machine		
Involved Employee(s):	[redacted]		
Miron Superintendent:	[redacted]		
Miron Project Manager:	[redacted]		
Incident Classification:	Cut to Knee		
Estimated Incident Cost:	$1,000 - $1,500		
Prepared By:	[redacted]		
Attendees:	[redacted]		

II. Incident Description

Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	Work being preformed was for [redacted] of [redacted] Wisconsin Rapids) - Knife was exposed on #93 Wet Machine and [redacted] was applying pressure in the process of tightening bolts that hold knife in with a Breaker Bar when it slipped off and [redacted] lost balance and fell into the exposed knife. Note; [redacted]n was using a 12 point #24 socket.
Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	Bodily injury – laceration to (R) knee cap, had 6 stitches.

Incident Review Analysis and Accountability System (IRAAS)

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	No, employee is comfortable with task. Note [redacted] is a 2nd year apprentice
2. Employee Placement: Is the worker physically mismatched for the job? (A person with a known back injury lifting heavy weights)	No, has done knife change in past (This was his 2nd time). [redacted] stated that he Was unaware of how sharp it was.
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	No, could have been in better (opposite) position. Look at knee pads and chaps along with Kevlar gloves .
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	No, everyone was doing their job (per [redacted]). Machine was down for day and this work was added first thing in the morning.
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high risk products, inadequate guarding, or poor access.	Machine was in normal state. Blades are dangerous. Caution labels for blades are in place.
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	Area was clean, no problems with access.
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	Chaps, gloves (more sturdy not just leather).
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	N/A
9. Established Method/Procedures: Does the current best method expose the worker to a risk?	Yes, will provide additional PPE. And perform a adequate pre task prior to start of work.

Incident Review Analysis and Accountability System (IRAAS)

10. Pre Task Planning: Would the incident have been prevented if the risks were identified on the Pre-Task Plan?	Yes very possible,Not done properly. Pre task form was not filled out, but went over with guys, but not through enough.

IV. Employee Conditions

MENTAL STATE(S) (Line out ONE OR MORE)			
~~Rushing~~	~~Frustration~~	~~Fatigue~~	**Complacency**
CRITICAL ERROR(S) (Line out ONE OR MORE)			
~~Eyes Not on Task~~	~~Mind Not on Task~~	~~**Line of fire**~~	~~**Balance, Grip, Traction**~~
What might prevent a recurrence in the future (Line out one OR MORE)			
Attention to detail	~~Reporting~~	~~**Work Rules**~~	~~Confrontation~~

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on fixing things permanently.

Action	Who	By When
Should this incident be shared with all Miron Employees?	Yes, go over what happened and goals that need to be met.	
	Needs to be put on Pre Task Planning Sheet.	

Incident Review Analysis and Accountability System (IRAAS)

The purpose of the Incident Analysis is to focus on system changes necessary to prevent a similar type incident from ever occurring again on a Miron project site.

I. Follow-up Meeting Information

Date of IRAAS:	11-11-09	Time of IRAAS:	10:00 AM
Date of incident:	11-06-09	Time of Incident:	1:00 PM
Incident Project Site:	[redacted]	Weather: Rain/Sunny/Cloudy/Snow/Ice	
Location of Incident on Site:	Loading Bays	Temperature ___ Wind Speed ___	
Involved Employee(s):	[redacted]		
Miron Superintendent:	[redacted]		
Miron General Superintendent:	[redacted]		
Miron Project Manager:	[redacted]		
Miron Project Executive:	[redacted]		
Miron Supervisor Taking Injured Employee to Hospital:	N/A		
Incident Classification:	Equipment Damage		
Estimated Incident Cost:	$		
Cost to Prevent Incident:	$		
Prepared By:	[redacted]		
Attendees:	[redacted]		

II. Incident Description

Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	A scissors lift (model 1930) was being lowered from the second floor to the ground to be removed from the building. The lift was rented by [redacted] from [redacted]. Since the pick was on the second floor, Miron operator, [redacted], was making a blind pick with an [redacted] painter signaling her as to where to pick the machine. When [redacted] had picked the lift into visibility, she noticed that it was being picked from the side and not with the fork inserts on the end. Once the load was in the air, the [redacted] employee closed the gate and left the scene. Being that the load was in the air and the gate was closed, [redacted] could not set the machine back on the second floor and decided to bring it to the ground. When the lift was about 5' off the ground, the Forklift had to be driven backwards to allow for the lift to be set onto the ground. When the outriggers were raised the load shifted and rolled off the side of the forks.

Incident Review Analysis and Accountability System (IRAAS)

Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	Scissors lift fell approx. 5' and had substantial damage.

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	[redacted] – Possibly [redacted] – No
2. Employee Placement: Is the worker physically mismatched for the job? For example: a person with a known back injury lifting heavy weights.	N/A
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	[redacted] – Improper Rigging
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	No
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high-risk products, inadequate guarding, or poor access.	Hydro was set-up below the picking area not allowing the forklift to set the load on the ground without repositioning.
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	Picks are now made before or after normal working hours (7-3:30) to ensure we are not picking over employees working off of the scaffold.
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	N/A
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	

Incident Review Analysis and Accountability System (IRAAS)

9. Established Method/Procedures: Does the current best method expose the worker to a risk?	Not if picked correctly
10. Pre-task Planning: Would the incident have been prevented if the risks were identified on the Pre-task Plan?	Possibly – First lift with the new set-up and landing area.

IV. Employee Conditions

MENTAL STATE(S) (CIRCLE ONE OR MORE)			
Rushing	Frustration	Fatigue	**Complacency**
CRITICAL ERROR(S) (CIRCLE ONE OR MORE)			
Eyes Not on Task	Mind Not on Task	Line of Fire	**Balance, Grip, Traction**
What might prevent a recurrence in the future (CIRCLE ONE OR MORE)			
Attention to Detail	Reporting	**Work Rules**	Confrontation

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on permanently resolving the issue.

Action	Who	By When
Should this incident be shared with all Miron Employees?	Yes - [redacted] the How It Happened	Next Thursday
Should disciplinary action be taken?	No	

Employee Signature:_____

Project Manager:_____

Incident Review Analysis and Accountability System (IRAAS)

The purpose of the Incident Analysis is to focus on system changes necessary to prevent a similar type incident from ever occurring again on a Miron project site.

I. Follow-up Meeting Information

Date of IRAAS:	6/23/09	Time of IRAAS:	3:00 AM / PM
Date of incident:	6/6/09?? not sure	Time of Incident:	unsure AM / PM
Incident Project Site:	080370	Date of Follow-up:	----
Location of Incident on Site:	Not entirely sure, possibly getting in and out of trenches		
Involved Employee(s):	[redacted]		
Miron Superintendent:	[redacted]		
Miron General Superintendent:	[redacted]		
Miron Project Manager:	[redacted]		
Miron Project Executive:	[redacted]		
Miron Supervisor Taking Injured Employee to Hospital:	Took himself to the hospital for a previously scheduled appt.		
Incident Classification:	Groin Strain		
Estimated Incident Cost:	$100		
Prepared By:	[redacted]		
Attendees:	[redacted]		

II. Incident Description

Describe what happened during the incident including the tasks being performed, equipment involved, and any contributing factors to the incident.	[redacted] stated that he was unsure of when it happened or what task he was performing. Says he felt it over the weekend after working all week.
Result of Incident (Injured Employees, Equipment Damage, Schedule Setbacks)	Upon going to the chiropractor for a 6 month routine visit, he was advised to get examined for a hernia. He had previously set up an appointment for other health concerns and had asked the doctor to examine his groin. Was told to step carefully when walking for 1-2 weeks. No restrictions were given, but told to take ibuprofen. There was a drug test performed. Not a lost time incident.

Incident Review Analysis and Accountability System (IRAAS)

III. Determine which BASIC CAUSES contributed to the incident:

Basic Causes (Not all-inclusive)	If this is one of the basic causes, explain why.
1. Knowledge: Is the employee lacking training required to perform the task safely?	He has been participating in the Workstrong program. Not lacking training.
2. Employee Placement: Is the worker physically mismatched for the job? (A person with a known back injury lifting heavy weights)	No, he is fine for the job
3. Safe Practice Enforcement: Were work rules being violated? Are safe working practices being ignored?	He says no, he was performing the work in a safe manner. There are improvements within the organization for working safely.
4. Feedback System: Was inattentiveness a factor? Are safe practices disregarded when schedule or budget become challenges?	No and no
5. Design/Construction: Is the design of the facility inherently dangerous? For example: low clearance, high risk products, inadequate guarding, or poor access.	Everyone is very good on the jobsite. Everyone is observing everyone.
6. Jobsite Conditions: Were jobsite conditions inadequate? For example: poor site access, housekeeping issues, inclement weather, poor lighting?	The jobsite is neat and organized. The conditions are as adequate as possible
7. Personal Protective Equipment (PPE): Was the prescribed PPE missing? Was the required PPE inadequate?	N/A
8. Inspection, Maintenance, and Purchasing: Did something fail? Would use of a different product have prevented the incident?	No.
9. Established Method/Procedures: Does the current best method expose the worker to a risk?	Repetitively he is walking in and out of the trench +/- 16" steps
10. Pre Task Planning: Would the incident have been prevented if the risks were identified on the Pre-Task Plan?	Everyone is very aware of their work assignments

Incident Review Analysis and Accountability System (IRAAS)

IV. Employee Conditions

MENTAL STATE(S) (CIRCLE ONE OR MORE)			
Rushing	Frustration	Fatigue	Complacency
CRITICAL ERROR(S) (CIRCLE ONE OR MORE)			
Eyes Not on Task	Mind Not on Task	Line of fire	Balance, Grip, Traction
What might prevent a recurrence in the future (CIRCLE ONE OR MORE)			
Attention to detail	Reporting	Work Rules	Confrontation

V. Corrective Actions:

For each basic cause identify the appropriate follow-up actions to take place. For every follow-up action, identify who is responsible and the date of expected completion. Follow up actions should focus on fixing things permanently.

Action	Who	By When
Should this incident be shared with all Miron Employees?		

Appendix B: Explanation of the IRAAS Process

Incident Review, Analysis, and Accountability System (IRAAS)

PURPOSE:

The purpose of the "Incident Review, Analysis and Accountability System" (IRAAS) is to establish a procedure that will assist in the systematic management of exposure to the ABC Construction organization. IRAAS will force management to review each incident (see incident definition below) on a case by case basis with the goal of discovering both "contributing" and "root" cause(s) to the incident. Information gathered during the IRAAS process will be used to develop systems, procedures, and policies that are designed to prevent the reoccurrence of future incidents. If deemed appropriate, and based on the results of the IRAAS process, disciplinary action will be administered accordingly.

IMPLEMENTATION DATE: August 1, 2009

INCIDENT DEFINITION:
The definition of an incident will be defined in a manner that will set firm guidelines but still allow flexibility for professional judgment and discretion.

The following items will be defined as an incident, and therefore be subject to the IRAAS process:

- Any lost time injury
- Any restricted activity injury
- Any recordable injury
- Any 1st Aid injury
- Any property or equipment damage (other than "expected or ordinary" wear due to typical use)
- Any motor vehicle damage or DOT moving violation, to include speeding more than 10 miles an hour over posted speed limit
- Any OSHA citation (other than those by voluntary consultation services of federal or state OSHA programs)

The following items may qualify as an incident, and may be subject to the IRAAS process:

- Near miss
- Failing to comply with OSHA standard
- Failure to comply with safety policy of client or ABC Construction.
- Observed or reported motor vehicle complaint
- Employee misconduct

EXECUTION:

Initiation: In most cases, the IRAAS process will be initiated and coordinated by the risk control manager overseeing the region in which the incident occurred. In some cases, (such as near misses, failure to comply with safety policies or standards, or employee misconduct) the IRAAS process may be initialed by the superintendent, project manager, project executive, or general superintendent. If the incident involves a motor vehicle, the process will be initiated by the risk control coordinator.

Involvement: All individual(s) directly involved in an incident, as well as his/her full supervisory chain of command will be involved in the IRAAS process. For the purpose of IRAAS, the full supervisory chain of command includes: foremen, superintendent, general superintendent, project manager, project executive, risk control manager, and an executive. If the incident involves an individual based out of the yard or office, the same respective supervisory chain of command will be engaged. Witnesses and employees working in close proximity to the incident location, or individuals who could have taken action to prevent the occurrence of the incident will also be involved in the IRAAS process.

Location where IRAAS will occur: The IRAAS process will take place in the corporate office or in the regional office that is closest to the incident location. It will be the exception to allow the IRAAS process to take place in the project field office.

Disciplinary actions: Disciplinary actions should remain consistent with current disciplinary policy. However, an elevated disciplinary measure may be taken based on details and circumstances of the incident, as well as the results of the IRAAS process. If disciplinary measures are taken, a Notice of Noncompliance form must be filled out. One copy of the Notice of Noncompliance must be inserted into the IRAAS file and the other copies must be distributed in accordance with directions on the bottom of Notice of Noncompliance form. The decision to administer disciplinary action will be made collectively by the following individuals involved in the IRAAS process: executive, project executive, project manager, general superintendent, and risk control manager. The exclusion of the superintendent and foreman from the IRAAS disciplinary process does not exclude or prevent those individuals from implementing or administering disciplinary actions. If multiple disciplinary actions are submitted, the more stringent disciplinary measure will be implemented.

Failure to participate In IRAAS: With the goal of ensuring a safe workplace and maintaining a competitive business posture through quality, productivity and safety, it is imperative that all identified individuals participate in the IRAAS process when called upon. If an individual chooses not to participate in the process, that individual may be terminated or denied future employment with ABC Construction.

INFORMATION OBTAINED THROUGH THE IRAAS PROCESS:

Findings, details, and information gathered through the IRAAS process will serve several purposes. First, critical information will be shared with the rest of the ABC Construction organization through established communication channels such as "The Messenger" or "How It

Happened." The goal of information sharing is to prevent the reoccurrence of actions that may produce negative results. Findings, details, and information gathered will also be used to implement new policies and procedures or refine existing policies and procedures. It is important to point out that the name(s) of individual(s) and the project site will not be shared.

QUESTIONS THAT WILL BE ASKED

What is the purpose of IRAAS?

The purpose of IRAAS is to determine the causes of the incident and make systemic changes to prevent the reoccurrence of similar situations, as well as hold personnel accountable for their behaviors. If it is found that inadequate policies and procedures are the causes of the incident, they will be changed accordingly throughout the project site and the organization as a whole. Most importantly, through this process, ABC Construction is ultimately able to determine the causes of the incident and use this knowledge as a proactive approach to prevent similar occurrences from happening.

Is this process going to be time consuming?

This process will take approximately one hour to complete. The exact time frame depends on the severity of the incident; the number personnel involved, and alternate questions that may come up as a result of answers on the IRAAS form.

Is it fair to hold managers accountable for losses?

The outcome of the IRAAS will determine who is to be held accountable for the incident. The management team will be held accountable for the following:

- Inadequate training of the individual prior to performing the task
- Knowingly accepting substandard, or allowing unsafe, work practices to occur

Is it fair to hold a professional tradesperson accountable?

It is a fact that approximately 90 percent of all worker compensation losses are caused by unsafe acts. It is also a fact that the party with the most control over the prevention of unsafe acts is each individual employee. With those two facts stated, it is fair to hold individual professional trades people accountable for their actions. Professional judgment will be used in each incident to determine accountability. A tradesperson will be held accountable for the following:

- An incident as a result of performing unsafe acts, improper, or at-risk behaviors
- Incompetency, complacency, or disregard for safety while performing a task

Will the name of an injured individual, supervisor, or project site be publicly disclosed?

Being that our ultimate goal is to prevent the elements and behaviors that cause loss to our people, projects, and property, not to find blame, fault, or foster embarrassment, the individual's name, supervisor's name and project site name will not be publicly disclosed.

Appendix C: Human Research Subject Consent Form

Title: Implementing an Incident Review Analysis and

Accountability System for ABC Construction

Investigator:
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Research Sponsor:
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Description:
The objective of the study is to determine the adequacy of a post-incident analysis for a specific organization and its effectiveness. It is the intention of this study to develop a post-incident analysis procedure that will assist in the systematic management of exposure at the ABC Construction organization that encompasses accidents/near misses for all employees of the organization. The research performed will determine guidelines and procedures necessary to maximize the potential for preventing a reoccurrence of loss.

Risks and Benefits:
Any risk to the subjects involved is the risk from normal everyday job duites of the employees. No additional risk will be placed on any subject involved in the study.

The benefit from this study to the subjects is determining possible errors in a safety management system, through use of this tool. By determining these errors, an organization may incorporate necessary changes in their safety management system to rid hazards which may cause the possible reoccurrence of an incident.

Time Commitment and Payment:
Your time commitment to this study will not require any additional time from that of your normal job duties during a post-incident analysis review.

Confidentiality:
Any personal or demographic information from any employee involved with the post-incident review will be deleted from all forms by your safety manager prior to analyzing them for research. No one involved will be able to be identified from any information I receive.

Right to Withdraw:
During the post-incident review process, you will be asked to give to the best of your knowledge the happenings which occurred before, during, and after an incident. Whatever information you choose to provide is completely voluntary. If you wish not to be associated with this research, your safety manger will exclude your post-incident analysis form from the random sample provided for the study. If you wish to be withdrawn from the study after the random sample of analyses are provided for research, you may choose to do so without any adverse consequences.

IRB Approval:
This study has been reviewed and approved by The University of Wisconsin-Stout's Institutional Review Board (IRB). The IRB has determined that this study meets the ethical obligations required by federal law and University policies. If you have questions or concerns regarding this study please contact the Investigator or Advisor. If you have any questions, concerns, or reports regarding your rights as a research subject, please contact the IRB Administrator.

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Statement of Consent:
By engaging in the following post-incident analysis you agree to participate in the project entitled, Implementing an Incident Review Analysis and Accountability System for ABC Construction